

MARY

Mary developed from a circulation induced from an upper tropospheric low in the mid-Pacific trough. Tracing back to a position south of Midway Island on 11 July, the system drifted westward to a location halfway between Wake and Ocean Station Victor before aircraft reconnaissance identified it as a tropical storm on the 17th.

With Jean in the South China Sea and Lucy in the Philippine Sea, Mary increased the simultaneous storm count in the western Pacific to three.

Mary began to take a northward course later on the 17th as she rounded the southeastern periphery of a high cell situated north of the western Hawaiian Islands. The small size of Mary, the uncertainty of forward acceleration, coupled with the storm's position being outside the FWC APT coverage area on the 18th shed uncertainty as to her location. However, a valuable and timely piece of information was relayed to Guam by NESS at Suitland, based on the position of Mary on their geostationary ATS-1 satellite picture. With this information a reconnaissance aircraft was vectored toward Mary and found that she had achieved typhoon strength (Figure 5-23 and 5-24).

Remaining at minimal typhoon strength for 24 hours, Mary passed 150 n mi.west of Ocean Station Victor on the 20th and diminished to storm status as she headed northward. By morning of the 21st Mary was beyond the range of reconnaissance aircraft as she accelerated to a rate of 16 kt. By that afternoon satellite data indicated that cooler air had entered the storm as she headed northeast and was becoming extratropical.

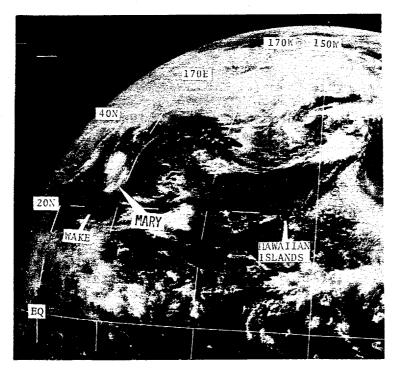


FIGURE 5-23. ATS-1 GEOSTATIONARY SATELLITE PRESENTATION OF MARY AS A NEWLY-FORMED TYPHOON NORTH OF WAKE ISLAND.

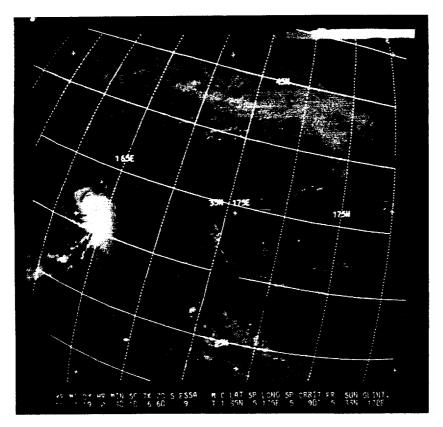


FIGURE 5-24. TYPHOON MARY ON 19 JULY AS SIGHTED BY ESSA-9 SOUTH OF OCEAN STATION VICTOR.

TYPHOON MARY EYE FIXES FUR CYCLUME NO. 17 17 JUL - 20 JUL 71

			UNIT-		FLT	088	กชว	MĮN	FLT				THKN		T1209
FIX			ME THOU	FI T	LVL	SFC	MIN	700MR		EYE	ORIEN-	FYF	WALL		0F
NO.	TIME	PUSIT	-ACCY	LVL	WND	GINE	SLP		TI/TO		TATTON		CLD	REMARKS	RADAR
1	130220Z	24.0N 179.5E	SATELIT	STG C				,,		, .,,		014	UL 17	Of Changs	AADAA
5	1603202	27.5N 169.5E	SATEL I 1	STG C											
3	1700302	27.2N 165.UE	54-P-25- 3	70 nMB	35	45	998	3109	11/08						
4	170227z	27.5N 165.UE	SATELII	STG C	•-			5.0	• • • • • • •						
5	172335Z	29.3N 165.3E	54-P- 6	70 nMB	40	35	1000	3082	14/12	ELTP	N-S	30X2n			
6	180200Z	29.3N 165.1E	54-P-10	700MB	40	45	994	2988	16/13		N-S	30X20			
7	1803262	24.5N 165.UE	SATEL TT	STR C				2 / //							
8	181120Z	30.0N 164.YE	VQ-P-15	700MB	60		918	2886	16/10	CIRC		15			
9	181605Z	30.5N 164.dE	54-P- 3- 2	70 nMB	70		9/3	2789	14/09	CIRC		17	7		
10	182200Z	31.1N 163./E	54-P- 7	700MB	85	70	970	2871	14/11	CIRC		15			
11	1900002	31.4N 163.7E	54-P	700MB				2865	/						
12	190205z	31.9N 163.2E							/						
13	190230z	31.5N 163.0E	SATELII	STG X	DIA	2 CAT	3.0		-						
14	190400Z	31.6N 163.3E	54-P- 8	700MB	65		976	2868	14/13	CIRC		15			
15	191021Z	32.9N 162.JE	VQ-R-10	3n0M				-	/	CIRC		20	5		32.0N 162.ZE
16	191531Z	33.6N 161.4E	VQ-P- 6	700MB	46		979	2966	17/11	CIRC		20			
17	192142Z	34.6N 160.9E	54-P-10- 2	700MB	45	45	975	2923	13/10	CIRC		20			
18	200300Z	35.5N 160.7E	54-P-10- 2	SOOMB	57	40	967		-1/-4	CIRC		20			
19	200J28Z	36.0N 160.UE	SATEL TI	STA C											
20	20100UZ	36.9N 161.JE	54-P- 8	SOOMB	40		987		-1/-1						
21	201410Z	38.3N 161.3E	54-P- 5	501MB	40		988		-2/-2						
22	210235Z	41.0N 164.UE	SATELIT	STG C											

TYPHOON MARY

0600Z 17 Jin TO 1800Z 20 JUL

	888	T 1	RACK				WARN	ING				24	HOU	FO	RECAS	ſ			4 HOI	IR F	ORFCA	5 T			72 HOL	IR FORE	CAST	
									ERI	RORS		_			E	1095	49		-			ERR	085		72 HOL		Eρ	PUNC
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170600Z Z	7.6N 16	4.6	E 40	28.	, 3N	163	. 6F	45	76	5	30.9N	1	58.70	5	5 73	•	0	33.7N	157.1	E	55 2	99	-15					
171200Z 2																												
1718007 2																									,-			
180000Z 2	9.0N 16	5.1	E 45	29.	, 3N	165	. 2F	45	19	0	31.1N	. 1	42.21	5 5 (7	-2	25	33.5N	160.8	E	45	84	-10	,-				
180600Z 2	9.6N 16	5.0	E 55	29.	, 7N	164	. 5£	45	27	-10	32.3N	1 1	41.31	- 50	7 (20	34 - 8N	161.3	E	45	81	-5					
181200Z 3									5	-20	32.3N		43.20	5	7	- 1	15	35.0N	102.4	E	40 1	58	-5					
1818002 3											33.1N																	
190000Z 3	1.4N 16	3.6	E 75	31.	2N	163	5F	70	13	-5	33.8N	1	۸۲.3E	60	99)	5										•-	
190600Z 3	2.2N 16	2.8	E 70	31.	, BN	163	. 2E	65	31	-5	34.5N	1 1	42.31	5	120)	>											
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191800Z 3																									,-			
200000Z 3	4.9N 16	0.8	E 55	35.	0N	160	.7F	50	A	-5	,-	-					•	,-							,-			
200600Z 3	6.1N 16	0.8	E 50	36.	. IN	160	. 8E .	40	0	-10		-					-	,-									•-	
2012002 3									72	-10	,-	_					•											
2018002 3	9.1N 16	ī. U	E AU	39.	JN.	162	1F																					

•	TYPHOONS WHILE	WIND OVEH	35KTS	ALL FORECASTS							
	WARNING 74-1	1R 48-HR	72-HR	WARNING	24-HR	48-Hg	72-HR				
AVERAGE FORFCAST ERROR	MIRI MMS4	1 179NM	0 N M	42NM	181NM	179NH	ONM				
AVERAGE RIGHT ANGLE ERPOR	35NH 126NI	108NM	0 N M	35NM	126NM	108NH	0 NM				
AVERAGE MAGNITUDE OF WIND ERROR	BKTS 14K	IS 9KTS	OKTS	8KTS	14KTS	9K T S	OKTS				
AVERAGE BIAS OF WIND ERROR	-6KTS -11K	T\$ -5KTS	OKTS	-6KTS	-11KTS	-5KTS	OKTS				
NUMBER OF FORECASTS	15 11	7	0	15	11	7	0				